

3. On new Species of Heterocera from Tropical America.  
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Fam. SYNTOMIDÆ.

1. *PSOLOPTERA BASIFULVA*, sp. nov.

Antennæ black. Head, thorax, and base of wings reddish; the wings otherwise and abdomen black, slightly tinged with dark blue; a small white lateral spot at the base of the abdomen. Exp. 32 millim.

*Hab.* Peru.

*Obs.* Allied to *P. thoracica*, Wlk., but differs in the reddish base of the wings.

2. *HOMŒOCERA CINCTA*, sp. nov.

Antennæ black, tipped with white. Head black, frons white. Collar black, a central orange spot and lateral metallic blue spot. Thorax black; patagia orange, margined with black. Abdomen dorsally with first segment yellow, otherwise black with metallic blue transverse lines, orange between the segments; anus orange; underneath black with some transverse white marks. Legs black. Primaries hyaline; the veins black, except the costal vein, which is reddish brown; an orange streak at the base above the submedian vein and another below it; the inner and outer margins narrowly black, the apex broadly black; a narrow black discal line. Secondaries hyaline, the outer margin finely black, the inner margin and anal angle broadly black. Exp. 28 millim.

*Hab.* Aroa, Venezuela.

3. *SPHECOSOMA SIMILE*, sp. nov.

Antennæ yellow, the tips black. Head yellow, a black spot posteriorly. Collar yellow, edged with black. Thorax yellow, the patagia inwardly edged with black. Abdomen yellow, with dorsally six broad black transverse bands. Legs yellow. Wings yellowish hyaline; the subcostal and median veins yellowish, the other veins black; the fringe blackish; a small black border at the apex of the primaries. Exp. 26 millim.

*Hab.* Aroa, Venezuela.

*Obs.* Very closely allied to *S. arctata*, Walk.

4. *GYMNELIA AROA*, sp. nov.

Antennæ black. Head and thorax black; a few dark bluish scales on the collar. Abdomen black; a subdorsal dark blue line, interrupted posteriorly on each segment; lateral orange streaks between the segments, and a lateral row of blue spots; underneath an outer row of yellow spots. Legs black; fore coxæ white.

Wings hyaline, the margins broadly black, especially the outer margins; a black spot at the end of the cell on the primaries. Exp. 33 millim.

*Hab.* Aroa, Venezuela.

5. *LÆMOCHARIS MULTIGUTTA*, sp. nov.

Antennæ black. Head black, with a crimson lateral spot. Collar black, with two crimson spots. Thorax black. Abdomen black; two basal segments with crimson spots, the other segments banded with red, interrupted subdorsally. Underneath a white spot. Legs black, fore coxæ white. Wings smoky hyaline, the veins and margins black; some crimson streaks at the base of the primaries, and on the same wings a black spot at the end of the cell. Exp. 23 millim.

*Hab.* Aroa, Venezuela.

6. *THRINACIA SALTA*, sp. nov.

Antennæ black. Head black, frons white. Thorax crimson; tips of patagia black. Abdomen black. Legs black, fore coxæ white. Wings black; the basal half of the primaries semi-hyaline except the costal and inner margin. Exp. 20 millim.

*Hab.* Aroa, Venezuela.

7. *PSEUDOMYA PICTA*, sp. nov.

Antennæ black. Head black, with a large crimson spot. Collar yellow. Thorax black, a crimson spot laterally on patagia. Abdomen dorsally crimson at the base, followed by a broad yellow space, the terminal half brownish; underneath brownish yellow. Legs black. Wings smoky brown, semi-hyaline, the margins a little darker. Exp. 22 millim.

*Hab.* Aroa, Venezuela.

8. *COSMOSOMA TIGRIS*, sp. nov.

Antennæ black. Head black, streaked with metallic blue. Collar yellow, laterally metallic blue. Thorax with a metallic blue spot posteriorly; patagia yellow, outwardly edged with blue. Abdomen bright yellow, with a narrow black transverse band on the posterior portion of each segment; segments 2 and 3 laterally blackish; a lateral row of metallic blue spots. Legs yellow with smoky streaks. Wings hyaline with narrow black margins, and the apex of the primaries broadly black; some yellow at the base of the inner margin, and a yellow streak on the costal margin. Underneath, the costal margin of the secondaries broadly orange-yellow. Exp. 34 millim.

*Hab.* Aroa, Venezuela.

9. *COSMOSOMA PLUTONA*, sp. nov.

Head and thorax black. Collar dark metallic green. Abdomen dorsally very brilliant crimson; underneath black with a white

mark. Wings hyaline, narrowly and evenly bordered with black; all the veins black and a black line at the end of the cell. Exp. 30 millim.

*Hab.* Castro, Paraná.

10. *DYCLADIA CINGLA*, sp. nov.

Palpi yellow. Head black, frons grey. Collar yellow. Thorax yellow, with three black stripes and a metallic blue spot posteriorly. Abdomen yellow; the third segment dorsally black, with three blue spots and two minute yellow spots; the following two segments with a black subdorsal spot each; last segments black, with a subdorsal and lateral blue spots. Wings hyaline, narrowly margined with black; the apex of the primaries broadly black; the costal vein yellow; the inner margins yellowish. Exp. 26 millim.

*Hab.* Aroa, Venezuela.

11. *MARISSA REGIA*, sp. nov.

Antennæ black, tipped with white. Head black, frons whitish, two metallic blue spots posteriorly. Collar black, two metallic blue spots. Thorax black, a broad white streak on patagia; a posterior blue and whitish spot. Abdomen, first three segments crimson, the second spotted with black and blue; the other segments black, with a subdorsal, two lateral, and two ventral rows of white spots. Legs black; tarsi, joints, and fore coxæ white. Primaries hyaline, the margins broadly black, still more so at the apex and inner angle; a small vitreous elongate spot on the costal margin at the base; a basal transverse black mark; a large black spot at the end of the cell, and connected by a broad black mark on vein 2 with the inner angle. Secondaries hyaline, the margins irregularly bordered with black. Exp. 34 millim.

*Hab.* Aroa, Venezuela.

*Obs.* Allied to *M. eane*, Hübn.

12. *ÆTHERIA PAULA*, sp. nov.

Body velvety black; the last three segments of the abdomen dorsally and laterally crimson; a round whitish spot on either side of the collar. Wings hyaline, the veins black and all the margins broadly black; at the end of the cell on the primaries a broad black spot from the costa to nearly the black border of the inner margin. Exp. 46 millim.

*Hab.* San Paulo, S.E. Brazil.

*Obs.* Closely allied to *Æ. hæmorrhoidalis*, Stoll, which has, however, the basal segment of the abdomen crimson, and has a black spot on the costal margin of the secondaries near the apex.

*PTYCHOTRICOS*, gen. nov.

Antennæ pectinated in both sexes, more so in the male than in the female. Primaries long and narrow, the outer margin very

oblique; veins 4 and 5 stalked; vein 6 from upper angle of cell; veins 7, 8, 9, 10, 11 stalked. Secondaries in the male with the outer margin very oblique, slightly excavated, the anal angle very acute; on the inner margin a fold enclosing a long tuft of hairs. The female has the outer margin slightly rounded, the anal angle also rounded; veins 3 and 4 stalked; 5 absent; 6 from upper angle of cell; 8 absent. Abdomen extending far beyond the secondaries, moderately stout.

13. *PTYCHOTRICOS ZEUS*, sp. nov.

Head black, bordered behind with orange. Thorax brownish black. Abdomen dorsally blackish; a subdorsal small orange basal spot; laterally and dorsally on the last segments brilliant metallic blue; underneath black with white bands. Fore coxæ white. Primaries above dark brownish black; the veins brownish; some brown streaks at the base, and a terminal row of oval lanceolate spots with dark centres; two semi-hyaline spots in the cell, and three transverse similar spots beyond the cell; a diaphanous shade below the median vein; a minute metallic blue spot on the inner margin. Secondaries black; a small hyaline spot at the base crossed by the black median vein; a tuft of long yellow hairs on the inner margin near the base. Underneath black, with all the semi-hyaline spots more distinct. Exp., ♂ 49 millim., ♀ 48 millim.

*Hab.* Aroa, Venezuela.

Fam. ARCTIIDÆ.

14. *ACLYTIA RUFIVENTRIS*, sp. nov.

Palpi black, crimson at the base. Head black, with two crimson spots behind the antennæ. Collar black, with a lateral crimson spot. Thorax black. Abdomen black dorsally, crimson underneath and apparently between the segments above also; the anal segment entirely black. Coxæ and trochanters crimson. Primaries above dull brown. Secondaries with the margins broadly smoky black and the disk vitreous. Underneath, the wings are similar, but more thinly covered with scales. Exp. ♀ 41 millim.

*Hab.* Jalapa, Mexico.

*MACHÆRAPTENUS*, gen. nov.

Antennæ toothed. Body stout. Palpi very short. Primaries long and narrow; apex rounded; outer margin very oblique; inner angle rounded; inner margin slightly sinuate; vein 6 from upper angle of cell; veins 7, 8, 9, 10 stalked. Secondaries triangular, costal margin rounded; outer margin excavated; discocellular straight; vein 5 absent; veins 6, 7, 8 stalked,

*Obs.* Allied to *Cratoplastis*, Feld,



15. *MACHÆRAPTENUS VENTRALIS*, sp. nov.

Head black. Collar creamy yellow edged with black. Thorax black; patagia creamy yellow tipped with black. Abdomen dorsally black, shaded with blue on the posterior half; underneath, coxæ and abdomen orange. Primaries yellowish white; the costal margin black; the base narrowly black; the inner angle finely black. Secondaries whitish. Exp. 42 millim.

*Hab.* Aroa, Venezuela.

16. *IDALUS ENERVIS*, sp. nov.

Palpi white, pink at the base. Head white, with a transverse pink streak. Collar white, laterally shaded with pink. Abdomen crimson dorsally, white underneath. Legs white, coxæ crimson. Primaries above bright yellow; the costal and inner margins finely white, the costa otherwise pinkish; a purplish shade contiguous to the white on the inner margin; a small purplish spot in the cell, and a large spot of the same colour at the end of the cell and extending beyond it; an outer transverse row of small purplish spots. Secondaries above white, with a few rosy hairs at the base. Underneath, the primaries are bright yellow, with the cellular spots crimson instead of purplish; secondaries white. Exp. 31 millim.

*Hab.* Castro, Paraná.

17. *EUCERON AROA*, sp. nov.

Head brown, two orange spots behind the antennæ. Collar brown. Thorax brown; a yellow streak on patagia. Abdomen greyish brown; anus orange; underneath banded with white. Primaries whitish grey; all the veins and apex dark grey; a subapical transverse white shade. Secondaries light greyish hyaline, the margins dark grey. Underneath, the primaries are of a uniform grey, with only the subapical white shade. Exp. ♀ 31 millim.

*Hab.* Aroa, Venezuela.

*Obs.* Closely allied to *E. costulatum*, H.-S.

18. *EUCEREON DENTATUM*, sp. nov.

Head grey, posteriorly crimson. Collar and thorax grey, streaked with black. Abdomen with the first segment grey; otherwise crimson dorsally, white below, black laterally; anus tipped with black. Primaries light grey; a basal and an inner dentate transverse darker line; beyond the latter a dark spot in the cell; a median dentate line followed by a large dark blotch at the end of the cell, which reaches from the costa to vein 2; an outer dentate line crossing a dark spot between 2 and 3, and followed by a similar line which does not reach the inner margin; a terminal row of dark spots, the largest one being just above the inner angle. Secondaries grey, the disk faintly hyaline. Underneath, the wings are dull grey. Exp. 31 millim.

*Hab.* Coatepec, Mexico.

19. *OPHARUS GEMMA*, sp. nov.

Palpi, legs, and abdomen below blackish. Antennæ black. Head, collar, and thorax light greyish brown; two minute black points on the collar. Abdomen dorsally orange, with a broad subdorsal brownish line tapering towards the anal segment. Primaries light greyish brown; an indistinct dark median shade not reaching the margins; beyond the cell a large dark brown spot cut by vein 5. Secondaries greyish brown. Exp. 55 millim.

*Hab.* Aroa, Venezuela.

20. *PSEUDAPISTOSIA ORDINARIA*, sp. nov.

Palpi, head, thorax, and primaries light brown. Secondaries whitish. Abdomen dorsally brown at the base, otherwise yellow with a subdorsal and a lateral row of short black streaks; underneath brown. Exp. 41 millim.

*Hab.* Castro, Paraná.

21. *HALISIDOTA PAGANA*, sp. nov.

♂. Palpi orange, tipped with black. Head, collar, and thorax black; the patagia black bordered with orange. Abdomen dorsally black; some small yellow marks laterally and underneath; the anal segment entirely yellow. Primaries above dark brown with the veins very distinct. Secondaries dull brown. Underneath, the wings are dull brown, yellow at the base. Exp. 36 millim.

*Hab.* Castro, Paraná.

*Obs.* The ♀ differs in having the last three segments of the abdomen yellow, with an interrupted subdorsal brown line.

22. *HALISIDOTA LINEATA*, sp. nov.

Palpi, head, and collar black. Thorax brown, shading to light buff posteriorly. Abdomen dorsally yellow, paler at the base; underneath whitish, with a ventral and lateral black line. Primaries above light buff, with a broad blackish streak extending from near the base on the median vein to the outer margin just below the apex; a marginal row of dark points. Secondaries white. Underneath whitish; the primaries with the costal margin buff, and a small subapical dark streak. Exp. 35 millim.

*Hab.* Castro, Paraná.

23. *PHÆGOPTERA JONESI*, sp. nov.

Palpi black, orange at the base. Head and collar buff, with two black spots on the latter. Thorax buff, with a few dark streaks. Abdomen dorsally orange; white below, with a ventral row of black marks, and a lateral row of small black spots. Primaries above buff; the veins brown; the outer margin broadly brown, inwardly very dentate towards the apex; a large brown spot at the end of the cell; an outer broad, irregular, transverse brown band, interrupted between veins 3 and 4, and not quite reaching either the costal or inner margins. Secondaries above whitish, narrowly margined with brown at the outer angle; a transverse

brown line at the end of the cell. Underneath, the markings are indistinctly repeated. Exp. 50 millim.

*Hab.* Castro, Paraná.

*Obs.* I take pleasure in naming this fine species after its discoverer, E. Dukinfield Jones, Esq.

24. *PHLEGOPTERA ARPI*, sp. nov.

Antennæ black, spotted with white; tips white. Palpi grey. Head yellow. Collar dark grey, laterally yellow. Thorax dark grey anteriorly, shading to yellowish posteriorly. Abdomen: base and last two segments dark grey; other segments bright yellow, black between the segments, only noticeable subdorsally; anus tipped with creamy hairs. Primaries whitish; a dark grey spot on the base of the inner margin; an inner and a median wavy grey line, the latter crossing a conspicuous round grey spot in the cell; beyond this a group of six large grey spots, two in the cell, the others between veins 2-6; an outer irregular grey line outwardly shaded with grey, dentate, extending on each vein towards the outer margin; a terminal row of large grey spots between the veins. Secondaries dark grey. Underneath grey, somewhat mottled with white. Exp. 42 millim.

*Hab.* Rio Janeiro.

*Obs.* Named after its discoverer, Mr. J. Arp.

25. *ARACHNIS TENEBRA*, sp. nov.

Head black, white posteriorly. Collar black. Thorax white with a large black spot; patagia black, broadly edged with white. Abdomen black. Primaries above black; some irregular quadrate white spots at the base; beyond this three large and one small white spot on the costal margin; two white blotches on the outer margin; a white spot at the origin of veins 3 and 4; a small white streak at the inner angle, and a large X-shaped white mark on the inner margin. Secondaries black. Underneath, wings black; fewer white marks on the primaries. Legs black; tarsi with white hairs. Exp. ♀ 40 millim.

*Hab.* Orizaba, Mexico.

*LAMPRUNA*, gen. nov.

Antennæ pectinated. Primaries short and broad; the outer margin slightly oblique. Secondaries broad oval; veins 3 and 4 from lower angle of cell; veins 5 and 6 absent; vein 8 from just beyond middle of cell.

Allied to *Symphlebia*, Felder.

26. *LAMPRUNA ROSEA*, sp. nov.

Head red. Collar orange, mottled with red; thorax reddish; patagia orange, edged with red. Abdomen red. Legs yellow, broadly banded with grey. Primaries above yellow, the veins red; a broad inner and outer transverse grey band, uniting above the

submedian vein, leaving on the inner margin a large yellow spot edged with red; on the yellow basal portion some small red spots; the inner transverse band bordered with red; some greyish spots on the costa and in the cell between the two bands; a terminal row of grey spots between the veins; fringe yellow, spotted with grey. Secondaries red. Underneath, wings yellow; an outer row of black spots on the primaries. Exp. ♂ 36 millim.

*Hab.* Aroa, Venezuela.

GRAPHEA, gen. nov.

Antennæ finely pectinated. Abdomen fairly stout. Primaries long, narrow; apex slightly acute; outer margin rounded, then oblique; vein 6 from upper angle of cell; veins 7, 8, 9 stalked. Secondaries long, narrow; veins 4 and 5 stalked; 6 and 7 from upper angle of cell; 8 from end of cell, nearly touching 7 in its entire length.

27. GRAPHEA MARMOREA, sp. nov.

Head and thorax brownish yellow; the collar and patagia edged with brown; two brown points on the collar. Abdomen pink dorsally, yellow underneath. Anterior portion of primaries from base of inner margin to apex yellowish, covered with rows of small, irregular orange spots, interrupted by an inner broad brown band and a large black spot at the end of the cell, connected with the costal margin by a brown shade; the posterior portion of the wing brownish mottled with lilacine; a terminal white line; the extremities of the veins whitish lilacine. Secondaries pink, slightly hyaline. Underneath yellowish pink, showing indistinctly the markings of the upper surface. Exp. 45 millim.

*Hab.* Aroa, Venezuela.

CRESEIRA, gen. nov.

Antennæ finely pectinated. Primaries long; the outer margin oblique; the inner angle rounded; veins 6, 7, 8, 9, 10 stalked. Secondaries with the outer margin well rounded. Veins 3 and 4 from lower angle of cell; 5 absent; 6 and 7 stalked; 8 from half the length of cell.

28. CRESEIRA ANNULATA, sp. nov.

Head and collar buff, the latter brown laterally. Thorax buff; patagia outwardly brown. Abdomen pink dorsally, yellowish underneath. Primaries above brown; the costal margin and apical third of the wing, except the outer margin, buff, with a number of ring-shaped brown spots, those on the costal margin with only a minute central buff point, the others consisting of fine rings; a subapical transverse brown line; the outer margin and inner angle lilacine. Secondaries pink. Underneath yellowish; the primaries showing the marks of the upper surface; secondaries with a brown discal spot. Exp. 44 millim.

*Hab.* Rio Janeiro.



## MUNONA, gen. nov.

Antennæ pectinated in both sexes. Wings long, fairly broad, the outer margin oblique. Primaries with vein 6 from upper angle of cell; 7, 8, 9 stalked. Secondaries with veins 4 and 5 from lower angle of cell; 8 short, from near the end of cell. Secondaries in the ♂ triangular, the inner margin and anal angle rounded.

## 29. MUNONA IRIDESCENS, sp. nov.

Body pale yellow; the collar posteriorly edged with orange; three orange streaks on the thorax. Fore coxæ orange. Primaries silvery yellow, all the veins slightly darker; an orange point at the base. Secondaries yellowish white, semi-hyaline. Exp., ♂ 52 millim., ♀ 65 millim.

*Hab.* Aroa, Venezuela.

## 30. ANTARCTIA VENATA, sp. nov.

Head and thorax reddish brown. Abdomen dorsally yellowish brown, ventrally black. The wings are rather thinly clothed with scales. Primaries greyish brown; all the veins white. Secondaries paler, with the white veins less distinct. Underneath, the same. Exp. ♀ 30 millim.

*Hab.* Castro, Paraná.

## Fam. EUPTEROTIDÆ.

## 31. APATELODES PARVULA, sp. nov.

Palpi brown. Head, thorax, and abdomen brownish grey, the base of the abdomen and two transverse shades on the thorax darker. Primaries grey, irrorated with brown scales; a large dark brown spot on the interior half of the inner margin, but not reaching the base, and outwardly crossed by a slightly oblique light shade; from near the middle of the costal margin a brownish indistinct band extends towards but does not reach the inner angle; from this band to the outer margin all the veins are distinctly paler; a light shade crosses the end of the cell; the outer line prominent, whitish, and anteriorly slightly curved outwardly; two subapical dark brown spots followed by two semi-hyaline spots. Secondaries above brown; the inner margin and anal angle greyish brown, darker; an outer transverse whitish line. Underneath brown, shaded with grey on the costal margins of both wings and on the inner margin of the secondaries, where there are also some brown marks; the outer transverse white line indistinct on the primaries, more distinct on the secondaries. Exp. 28 millim.

*Hab.* Castro, Paraná.

## 32. OLCECLOSTERA CASTRONA, sp. nov.

Palpi dark brown. Head and thorax grey, with a central brown

line. Abdomen reddish brown. Primaries above light grey, thinly speckled with dark scales; the inner and outer lines very indistinct, angular, and apparently geminate; the fringe dark brown; between veins 5 and 6 a small hyaline spot; on the costa near the apex a small dark shade. Secondaries light brown, with two indistinct wavy lines; the fringe on the outer margin near the anal angle very dark brown. Underneath greyish brown; the two lines on the secondaries distinct, and a minute black spot in the cell; on the primaries only the outer line visible, which is distinct and touches the hyaline spot. Exp. 28 millim.

*Hab.* Castro, Paraná.

### 33. OLCECLOSTERA AZTECA, sp. nov.

Body light grey; two lateral white spots at the base of the abdomen. Primaries above light grey, with two inner and two outer very distinct, slightly wavy dark grey transverse lines; the furthest line touching a round hyaline spot between veins 5 and 6; the outer margin from below the apex to the inner angle brownish, limited by a lunular dark line; a dark point in the cell. Secondaries brownish, with two slightly curved conspicuous dark lines; the extreme margin and fringe dark grey. Underneath brownish, with the transverse lines dark, the inner lines absent on the primaries; a black discal point on each wing. Exp. 32 millim.

*Hab.* Jalapa, Mexico.

### DUKINFELDIA, gen. nov.

Antennæ pectinated in both sexes, but more so in the ♂ than in the ♀. Body stout; abdomen extending beyond the secondaries. Primaries with the costal and inner margins straight, the outer margin and inner angle rounded; discocellulars inwardly and deeply curved below vein 5; vein 6 from upper angle of cell; 7, 8, 9, 10 stalked. Secondaries broad, the inner margin rounded; discocellulars angled below 5, a veinlet extending from this angle to the base; veins 6 and 7 stalked.

### 34. DUKINFELDIA SUPREMA, sp. nov.

Head reddish brown. Thorax mottled with long brown and grey hairs. Abdomen dorsally black, with a few white hairs; underneath banded orange and black.

♂. Primaries above white, all the veins dark reddish brown; the subcostal, median, and submedian veins most heavily marked; the costa finely black. Secondaries white, some orange hairs at the base. Underneath white, the extremities of the veins blackish. Exp. 53 millim.

♀. Primaries reddish brown; the costal margin grey; the base and spaces between veins on outer margin irrorated with grey scales; fringe white. Secondaries dull brown; fringe white. Underneath, wings dull brown, some orange scales at the base; fringe white. Exp. 65 millim.

*Hab.* Castro, Paraná.

## Fam. SATURNIIDÆ.

35. *HEMILEUCA DUKINFIELDI*, sp. nov.

Head, collar, and thorax dark buff; patagia black. Abdomen orange dorsally; underneath black, with a lateral row of small white spots. Primaries above dark brown, with all the veins finely outlined in orange; an outer transverse narrow white band. Secondaries similar, but the transverse band is less distinct, and the veins are not so distinctly marked towards the base of the wing, where there are also a quantity of long buff hairs, more noticeable in the male than in the female. Underneath, the wings are similarly but less distinctly marked. Exp., ♂ 60 millim., ♀ 75 millim.

*Hab.* Castro, Paraná.

## Fam. COSSIDÆ.

36. *ZEUZERA MASONI*, sp. nov.

♂. Head brown. Thorax and abdomen grey. Primaries light grey, with fine black transverse striæ; the basal third of the costa black; the central third of the median vein anteriorly shaded with black; a small dark space on the costa at two thirds from the base. Secondaries white; the outer margin irrorated with black; the fringe alternately white and grey. Exp. 51 millim.

*Hab.* Jalapa, Mexico.

*Obs.* Also in coll. Mason.

37. *LANGSDORFIA DUKINFIELDI*, sp. nov.

Palpi dark brown. Head, thorax, and abdomen light brown, the latter with a dark spot dorsally on the last segment. Primaries above fawn-colour shaded with smoky grey; a large velvety brown spot near the base, not reaching the inner margin, and containing a bright silver spot; just beyond this a pale V-shaped mark starts from the costal margin, nearly touches the inner angle, and then extends to the apex, turning in near the costal margin to form two curves in the direction of the cell; the space within the base of this V is dull grey, the upper portion reddish brown towards the apex, fawn-colour towards the base; on the outer margin the veins are slightly paler. Secondaries whitish, with smoky margins. Underneath, the primaries are dull brown, with two reddish-brown spots on the outer half of the costal margin; the secondaries whitish, irregular spots on the margins and two large brown spots on the costal margin. Exp. ♂ 38 millim.

*Obs.* The ♀ expands 48 millim. and has the secondaries brownish.

*Hab.* Castro, Paraná.

38. *LANGSDORFIA AROA*, sp. nov.

Abdomen dark brown; the patagia bordered with velvety brown. Primaries above the costa buff, spotted with dark velvety brown, each spot edged with whitish; a small triangular

buff space, speckled with black, on the inner margin, the base of the triangle formed by vein 2; the rest of the wing dark velvety grey, with large dark velvety brown spots, edged with lilacine, as follows:—a subapical irregular spot; a five-sided spot at a third from the base and reaching the median vein; a small triangular spot in the cell, resting on the median vein; a large oval oblique spot near the outer margin crossing veins 3 to 5; three spots between the median and submedian veins; a terminal row of spots disappearing towards the apex; the fringe reddish brown. Secondaries dull blackish brown. Underneath, primaries brown; secondaries dark grey, irregularly spotted with a darker shade. Exp. 46 millim.

*Hab.* Aroa, Venezuela.

Fam. HEPIALIDÆ.

39. DALACA SERTA, sp. nov.

Body reddish brown. Primaries reddish brown, greyish along the inner and outer margins; transverse lunular lines, interrupted by the veins, cover the wings with a mass of grey lanules outwardly shaded with brown, and they are most numerous on the outer third of the wing. Secondaries reddish brown. Exp. ♂ 41 millim.

*Hab.* Jalapa, Mexico.

*Obs.* Allied to *Dalaca assa*, Druce.

Fam. DIOPTIDÆ.

40. POLYPOETES RUFIPUNCTA, sp. nov.

Palpi black, orange at the base. Head black. Collar black, laterally white. Thorax black; patagia orange, with a black and a grey streak. Abdomen dorsally black; the posterior portion of each segment narrowly yellowish; underneath white. Primaries above black; all the veins on the basal half of the wing yellowish; a round white spot just beyond the cell; a round subapical orange-red spot. Secondaries above black; a round white spot beyond the cell, connected with the base of the wing by a broad yellowish space. Underneath, the primaries are black with the two spots as on the upper surface, and a white streak at the base; secondaries white, the outer margin broadly black. Exp. 25 millim.

*Hab.* Castro, Novo Friburgo.

Fam. LIMACODIDÆ.

41. SEMYRA CARDIA, sp. nov.

Palpi and head yellow. Thorax brown, mingled with yellow scales. Abdomen dark brown; at the base laterally covered with long yellow hairs. Primaries above violaceous brown; the costal margin for two thirds from the base narrowly yellow; the base of



the costal vein dark brown; a basal angular silver-white line from the median to the submedian vein, followed by an irregular golden-brown spot, outwardly shaded with dark brown; a dark velvety-brown streak in the cell, followed by a golden-brown spot between veins 5 and 6, and separated from it by an indistinct whitish line which extends from the costa to vein 2, where it joins a submarginal white line extending from the apex to the inner margin; this submarginal line is inwardly heavily shaded with dark brown, and is outwardly contiguous to some small brown spots. Secondaries yellowish white. Underneath, the primaries are light brown, the inner margin broadly white; the secondaries yellowish, the costal margin broadly light brown. Exp. 20 millim.

*Hab.* Castro, Paraná.

*Obs.* Very closely allied to *S. bella*, H.-S.

42. *TRABALA RUBENS*, sp. nov.

Palpi and head golden brown. The thorax purplish. Abdomen light golden brown, with a few purplish anal hairs. The primaries above golden brown, with the veins darker; the costal margin broadly suffused with purplish; an irregular dark line extends from the apex to the middle of the submedian vein, and is followed by an indistinct marginal shade. Secondaries above yellowish white; the fringe on both wings very long, the inner half golden brown, the outer half purplish. Underneath, the wings are light golden brown. Exp. 26 millim.

*Hab.* Castro, Paraná.

43. *TRABALA* (?) *TRUNCATA*, sp. nov.

Palpi, head, and collar brown. Thorax and abdomen yellowish brown. Primaries above yellowish brown; an indistinct basal and a median irregular transverse brown line; an outer heavily marked straight brown line, closely followed by an irregular indistinct line. Secondaries above brownish yellow, with an indistinct median brown line. Underneath yellowish brown, the outer margins paler; two distinct, irregular, outer brown lines; on the secondaries a brown dot at the end of the cell. Exp. 28 millim.

*Hab.* Castro, Paraná.

44. *PEROLA ADMIRABILIS*, sp. nov.

Palpi crimson, tipped with white. Head white, with all the scales around the eyes crimson. Thorax and body white; the patagia edged with crimson. Primaries above yellowish; at the base some crimson scales on the costal margin and a few black scales scattered on either side of the submedian vein; an indistinct curved band of blackish scales beyond the cell, and beyond this a short, indistinct crimson shade extends from the costal margin. Secondaries above white. Underneath, wings yellowish, the costal half of the primaries crimson. Exp. 22 millim.

*Hab.* Castro, Paraná.

45. *DALMERA FUMATA*, sp. nov.

Palpi and head orange. Collar whitish. Thorax and abdomen orange. Primaries above pinkish yellow, palest along the costa; at the end of the cell an oblique black streak; below this and from near the base of the subcostal vein to nearly the middle of the outer margin a heavy smoky-black shade, and from this a similar but smaller shade extends towards the inner margin. Secondaries above bright yellow; orange along the inner margin. Underneath, the wings are orange, the primaries having the base of the costa and a mark at the end of the cell black. Exp. 31 millim.

*Hab.* Castro, Paraná.

*Obs.* Closely allied to *D. tijucana*, Schaus.

## Fam. LASIOCAMPIDÆ.

46. *OCHA BRUNNEA*, sp. nov.

Above entirely dark brown. The primaries with two indistinct transverse median lines, slightly flecked with white; a submarginal irregular row of small black spots, almost imperceptibly flecked with greyish scales. Underneath lighter brown, with a few white scales on the costal margins of both wings at about two thirds from the base. Exp. 20 millim.

*Hab.* Castro, Paraná.

47. *OCHA FALSA*, sp. nov.

Above light brown. The primaries with the base and a broad shade through the cell darker; a black discal point and a marginal row of conspicuous black points; the basal lines indistinct; the outer line geminate, angular; a few black streaks between the end of the cell and the apex. Underneath light brown, with a marginal row of indistinct dark spots. Exp. 22 millim.

*Hab.* Castro, Paraná.

48. *OCHA FAMATA*, sp. nov.

Head and thorax light brown. Abdomen dorsally blackish, otherwise light brown. Primaries above light reddish brown; a dark streak at the base of the cell; the inner line fine, dark, geminate, wavy, and outwardly curved; the outer line also geminate, wavy, and outwardly shaded with whitish; veins 6-10 distinctly whitish; from the cell to the outer margin between veins 4 and 7 a dark shade containing three clusters of reddish-brown scales, which are contiguous to an irregular, fine, white marginal line; a small dark subapical spot between veins 9 and 10; the fringe pale, with dark spots. Secondaries above dark brown, with the costal margin broadly light brown, crossed by wavy white lines; some paler scales along the inner margin; fringe alternately buff and dark brown. Underneath dark brown; the costa finely and the inner margin of the primaries broadly buff; the

fringe on the secondaries paler, and on both wings a marginal row of indistinct dark spots. Exp. 25 millim.

*Hab.* Castro, Paraná.

49. *OCHA MARGINATA*, sp. nov.

Head and thorax brown, mingled with buff hairs. Abdomen brown. Primaries light brown, slightly hyaline, the veins all dark; some dark violaceous striæ at the base and on either side of a pale outer line, which forms a large wavy curve before reaching the middle of the inner margin; a broad marginal greyish shade; a terminal buff line; the apex light grey; the fringe dark at the inner angle. Secondaries brown; a greyish marginal line near the apex. Exp. 26 millim.

*Hab.* Jalapa, Mexico.

50. *HYDRIAS CASTRENSIS*, sp. nov.

Palpi yellowish. Head and thorax grey, the abdomen lighter. Primaries above grey; some brown scales at the base and also two contiguous transverse brown lines, the inner one wavy, the outer slightly dentate; a brownish-black spot in the cell; an outer indistinct transverse line, slightly dentate and outwardly shaded with buff; a wavy submarginal dark grey shade. Secondaries above white; the costal margin with the basal half brown, the outer half grey; the fringe grey. Underneath, the primaries are smoky-brown, whitish along the inner margin, a submarginal dark shade; the secondaries white, with two indistinct greyish lines on the costa. Exp. ♂ 25 millim.

*Hab.* Castro, Paraná.

Fam. LITHOSIIDÆ.

51. *LITHOSIA PERUVIANA*, sp. nov.

Head yellow, with a transverse grey band. Collar yellowish. Thorax pink. Abdomen yellowish, shading to deep orange at the anal segment. Primaries dark grey; the costal and inner margins, also a central longitudinal streak, yellowish. Secondaries yellow, shading to orange at the anal angle; the apex dark grey. Exp. 20 millim.

*Hab.* Peru.

52. *LITHOSIA VENOSA*, sp. nov.

Palpi and head orange, grey posteriorly. Collar, thorax, and abdomen greyish white. Primaries above light grey, all the veins and fringe white. Secondaries white, the costal margin tinged with grey. Underneath, primaries dark grey, fringe white; secondaries white, the costal margin and apex dark grey. Exp. 28 millim.

*Hab.* Castro, Paraná.

53. *CHORIA SEPARATA*, sp. nov.

Head deep yellow, with a transverse grey band; collar yellow. Thorax dark grey; patagia yellow, inwardly shaded with grey. Abdomen yellowish; in the female a black dorsal spot on the last segment denuded of scales. Primaries above silvery white; the inner margin broadly dark grey, anteriorly shaded with yellow; the costal margin finely yellow. Secondaries yellowish white; the apex broadly smoky grey. Underneath, the secondaries are the same; the primaries are smoky grey, with two thirds of the costal margin, a streak beyond the cell, and a streak above the inner margin yellowish. Exp. 27 millim.

*Hab.* Castro, Paraná.

*Obs.* In the female the secondaries are entirely yellowish white, and the primaries below are whitish with the inner and outer margins smoky.

54. *CRAMBOMORPHA MARCATA*, sp. nov.

Head, collar, and thorax dark grey; the collar laterally and base of patagia yellowish. Abdomen whitish grey, shading to yellow at the last segment. The primaries above silvery white; the costal margin chrome-yellow; the inner margin broadly dark grey, with a whitish streak at the base. Secondaries white, faintly tinged with grey on the outer margin. Underneath white, the primaries tinged with grey, and the chrome-yellow costal margin very conspicuous. Exp. 34 millim.

*Hab.* Rio Janeiro.

*Obs.* I have a female absolutely similar from Peru.

55. *CRAMBOMORPHA VIRGINIA*, sp. nov.

♀. Palpi luteous. Head dark grey. Collar and abdomen fawn-colour. Thorax white. Wings pure white, the primaries silvery; secondaries thinly covered with scales. Exp. 31 millim.

*Hab.* Castro, Paraná.

*Obs.* Allied to *C. argentea*, Feld., but smaller and a more delicate insect. The colour of the collar distinguishes the species at once.

56. *CRAMBIDIA CORCOVADA*, sp. nov.

Head and thorax grey. Abdomen dorsally grey, underneath yellowish. Primaries above whitish, the inner margin greyish; secondaries yellowish white. Underneath, the primaries are greyish, the basal half tinged with yellow; the secondaries whitish, the costal margin yellow. Exp. 21 millim.

*Hab.* Rio Janeiro.

57. *CRAMBIDIA PETROLA*, sp. nov.

♂. Body grey; anal segment of abdomen yellowish. Primaries white; the costal margin finely chrome-yellow; the inner margin



shaded with brownish grey. Secondaries white. Underneath, the primaries are yellowish white. Exp. 24 millim.

*Hab.* Tijuca, Petropolis.

*Obs.* The female similar in every respect.

58. *SALOPOLA VESTALIS*, sp. nov.

♂. Silvery white; the inner margin of the primaries very light brown. On the costal margin of the secondaries a long tuft of yellow hairs. Underneath white; a tuft of yellow hairs on the primaries just above the median vein, and curling over the origin of veins 2, 3, and 4. Exp. 33 millim.

*Hab.* Castro, Paraná.

*Obs.* This species is closely allied to *S. argentea*, Walk., but differs in its white secondaries and tufts of hairs, which are longer in *S. argentea* and black on the underside of the primaries.

59. *AREVA PERPENZA*, sp. nov.

♂. Body white above, yellow underneath. Primaries white; the costal margin pale yellow; the inner margin faintly brownish. Secondaries white, with a few long yellow hairs in the cell. Underneath white; the primaries with the outer margin slightly smoky, the costal margin orange, and there is a large oval cluster of long hairs. The primaries are a little longer than the secondaries and very broad. Exp. 31 millim.

*Hab.* Jalapa, Mexico.

Fam. NOTODONTIDÆ.

60. *CEDEMASIA TROPICA*, sp. nov.

Palpi, head, and collar brown. Thorax whitish. Abdomen light brown. Primaries above light grey; the costa and base shaded with brown; a wavy, fine, geminate, black median line, inwardly shaded with brownish, and followed at the end of the cell by an inwardly curved black crescent-shaped line; an outer geminate black line, interrupted and very indistinct; a terminal black wavy line, with inwardly a short black streak on each vein. Secondaries brown. Underneath, primaries brown, secondaries whitish margined with brown. Exp. 39 millim.

*Hab.* Aroa, Venezuela.

61. *RIFARGIA MASTA*, sp. nov.

Palpi, head, and thorax brown, thickly mottled with green scales. Abdomen dark grey, with still darker clusters of scales subdorsally. Primaries above moss-green, mottled with brown, and paler beyond the cell; at the base a fine black streak surmounting a pale spot on the inner margin; the basal and median lines almost imperceptible; a dark brown transverse streak at the end of the cell; the outer line represented by two series of minute dark spots on the veins separated by white scales; the submarginal line indistinct, forming towards the inner angle some

brownish spots; a terminal row of lunular green spots between the veins; the fringe dark grey. Secondaries greyish, with the extreme outer margin much darker. Underneath greyish, the extreme margins brown. Exp. 40 millim.

*Hab.* Jalapa, Mexico.

62. *EDEMA ASTUTA*, sp. nov.

Palpi brown. Head dull yellow. Collar brown. Thorax light lichen-green. Abdomen brown above, dull yellow underneath, with a dark ventral line. Primaries above dark brown, with the inner margin broadly greyish; the veins flecked with alternately dark and light scales; the middle of the costal margin, a quadrate spot in the cell, and some surrounding shades of a very dark and dull brown; a submarginal series of triangular dark spots, followed by a row of small clusters of black scales; the apex yellowish white, with some subapical light brown streaks; the fringe brown, spotted with yellowish. Secondaries above brown, with the fringe dull yellow. Underneath, the wings are brown with a pale shade at the apex of the primaries and a marginal row of brown dots. Exp. 48 millim.

*Hab.* Jalapa, Mexico; Aroa, Venezuela.

*Obs.* This species is very closely allied to *E. mandela*, Druce.

63. *LIRIMIRIS* (?) *MEPHITIS*, sp. nov.

Palpi, head, and thorax brownish grey; the abdomen paler, except dorsally on the first segment, where there is a tuft of rich brown hairs. Primaries above greyish brown, slightly darker towards the outer margin, except a submarginal transverse shade which is very indistinct; the inner margin irrorated with much lighter scales, amongst which a few small clusters of dark brown scales are very conspicuous; at the end of the cell two dark brown spots, the lower one much the larger. Secondaries above brown, with a few dark scales at the anal angle, surmounted by a small yellow spot. Underneath, the wings are light brown, with a few small black streaks on the costal margin of the primaries near the apex. Exp. ♀ 46 millim.

*Hab.* Jalapa, Mexico.

*Obs.* Also in coll. Mason.

64. *LOPHODONTA* (?) *PALLIDA*, sp. nov.

Head and thorax greyish white. Abdomen greyish brown. Primaries above greyish white, the base shaded with brown; an inner transverse, dark brown, geminate line, indistinct towards the costa; a small brown shade in the cell, followed by a dentate brownish transverse line; a geminate, dark brown, outer line, dentate, followed by two yellow spots between veins 2 and 3, and 3 and 4, outwardly shaded with brown; a dark greyish costal space beyond the outer line; a terminal, fine, brownish line from the costa to vein 2. Secondaries brownish, the costal margin mottled with

white; fringe white. Underneath, primaries brownish, secondaries greyish. Exp. ♀ 44 millim.

*Hab.* Aroa, Venezuela.

65. *HETEROCAMPA PARANENSIS*, sp. nov.

Head and thorax grey, mottled with greenish scales; the collar somewhat paler. The abdomen grey above, yellowish white underneath. The primaries above light grey; two thirds of the costa from base darker grey, and also the base of the inner margin darker; a green shade extends from the base of the costal margin to the middle of the inner margin, and continues to the inner angle; the outer margin greenish, the extremities of the veins black; the apical third of the costa broadly amber-green, and an indistinct greenish shade from the costa, passing beyond the cell and extending to the outer margin. Secondaries above white; the costal margin brown, with transverse white shades; the inner margin brown, and the extreme outer margin narrowly brown. Underneath, the wings are white; the costal margin of the primaries yellowish, and the extreme outer margin and tips of the veins on the same wings brown. Exp. 35 millim.

*Hab.* Castro, Paraná.

66. *BLERA BOLIVARI*, sp. nov.

♂. Body greyish brown; patagia white. Primaries above white; a brown patch on the costa at a fourth from the base; a similar spot on the costa at three fourths from the base, followed by two small brown spots; the inner margin mottled with brown, forming in the female a triangular space connected by a brown line with the inner costal spot; the fringe white, spotted with brown. Secondaries greyish brown; fringe whitish. Underneath, primaries brown, the fringe and apical half of the costa spotted with brown; secondaries whitish, the costal and outer margins broadly shaded with greyish brown. Exp. 52 millim.

*Hab.* Aroa, Venezuela.

4. On the Habits of the Flying-Squirrels of the  
Genus *Anomalurus*. By W. H. ADAMS.<sup>1</sup>

[Received January 26, 1894.]

Along the whole length of the Colony of the Gold Coast, and parallel with and some 15 miles from the sea-shore, runs a range of high hills with deep gorges and ravines covered with almost impenetrable bush. These hills vary from 500 or 600 feet to a much greater height, and it is in this bush that I obtained the specimens of the peculiar Flying-Squirrels of the genus *Anomalurus* which I have presented to the British Museum<sup>2</sup>.

<sup>1</sup> Communicated by OLDFIELD THOMAS, F.Z.S.

<sup>2</sup> [With one single exception, the "small brown skin" mentioned on p. 245 (which is *A. fraseri*, Waterh.), all the skins obtained by Mr. Adams belong to